WHAT IS CLAIMED IS:

1. An endovascular graft comprising: one or more scaffold structures;

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a biocompatible, high tensile strength, abrasion resistant, highly durable thin-walled graft material affixed to the one or more scaffold structures, the graft material including spider dragline silk; and

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at least one connector for connecting the graft material to the one or more scaffold structures.

- The endovascular graft according to Claim 1, wherein the one or more scaffold structures comprises a plurality of first stents, a second stent and a third stent.
 - The endovascular graft according to Claim 2, wherein the graft material is affixed to an outer portion of the plurality of first stents, the second stent and the third stent.

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4. The endovascular graft according to Claim 1, wherein the graft material comprises a plurality of crimps between the one or more scaffold structures.

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- 5. The endovascular graft according to Claim 1, wherein the graft material is woven.
- 6. The endovascular graft according to Claim 1, wherein the graft material is knitted.

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7. The endovascular graft according to Claim 1, wherein the graft material is braided.

8. The endovascular graft according to Claim 1, wherein the at least one connector comprises sutures.